

APPENDIX B

Pioneer Patent Status

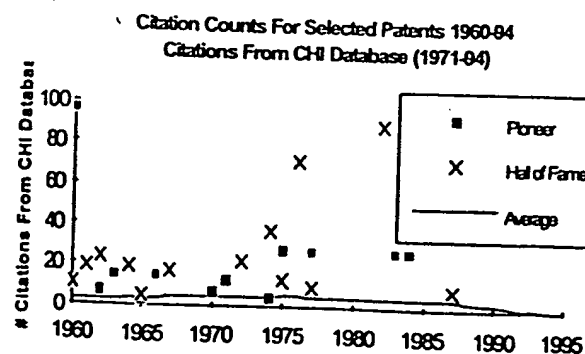
An informal, periodic newsletter to keep our clients and colleagues informed of interesting findings at CHI Research.

'Pioneer Patents' are Heavily Cited by Later Patents

In a series of published papers CHI has shown that technologically important patents tend to be much more highly cited than average patents. We have now extended that finding to legally important patents, by showing that patents designated as 'Pioneer patents' by the courts also tend to be much more highly cited than average patents. Furthermore, in a similar analysis we have found that patents in the National Inventors Hall of Fame are also cited much more than average.

Pioneer patents are patents which the courts have found to be so groundbreaking that they deserve a wide breadth of protection in construing their claims and specifications. Hall of Fame patents are U.S. patents selected by a committee of representatives from national scientific and technical organizations.

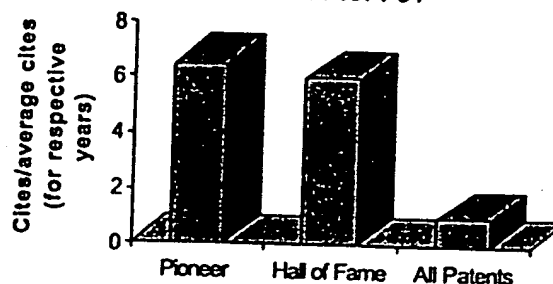
The graph below shows the number of citations received since 1971 for Pioneer and Hall of Fame patents issued since 1960; the solid line shows the number of citations an average patent has received since 1971. (1971 is the first year that patent citation data are available in machine readable form.) All of the Hall of Fame patents, and all but two of the Pioneer patents have been cited more than expected, and several have been cited more than 20 times, including S.D. Stookey's 1960 patent "Method of making Ceramics and Product Thereof" with 96 citations since 1971. Stookey's patent has 93 more citations than the average 1960 patent and continues to be cited by recent patents, including 4 patents issued in 1994.



Further, we have found that the citations are rather evenly distributed among later patent years; the citations accrue steadily, and do not suddenly accumulate after a patent is designated as a Pioneer or Hall of Fame patent.

The summary histogram shows that on average, Pioneer patents are cited 6.6 times as frequently as expected, and Hall of Fame patents 6.3 times the expected rate.

Citation Indices for Selected Patents
Patents Granted 1960-94
Citations from 1971-94



The Implications

- This is further evidence that important patents tend to be highly cited by later patents.
- Citation analysis may provide solid evidence for use in patent infringement cases.
- A patent with large numbers of citations may be entitled to broader claims because it has greatly advanced the state of the art. For as Justice Brewer stated in *Westinghouse V. Boyden Power Brake Company* May 9, 1898, "The very term, 'pioneer patent' signifies that the invention has been followed by others. A pioneer patent does not shut, but opens the door for subsequent inventions."

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Areas of Interest:

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|---|---|
| <input type="checkbox"/> Competitor Assessments | <input type="checkbox"/> Domain Mapping |
| <input type="checkbox"/> Core Competency Self Assessments | <input type="checkbox"/> Hot-Spots Identification |
| <input type="checkbox"/> R&D Productivity Assessments | <input type="checkbox"/> Critical Technologies |
| <input type="checkbox"/> Cross Licensing Support | <input type="checkbox"/> Science & Technology Linkage (Critical Sciences) |
| <input type="checkbox"/> M&A Targeting | <input type="checkbox"/> National & Regional Strength |
| <input type="checkbox"/> M&A Technological Due Diligence | <input type="checkbox"/> Technology Transfer & Dependencies |
| <input type="checkbox"/> Investment Databases | <input type="checkbox"/> Company Profiles |
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